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ABSTRACT

Based on information solicited from database producers which had files publicly available on SDC and/or Lockheed, this study is intended to help searchers assess available database support materials with regard to their cost, format, depth, and purpose. The eight assumptions addressed cover the following areas: (1) the amount of reference material provided by for-profit database producers vs. the amount provided by non-profit producers: (2) the availability of free or low-priced materials from government database producers: (3) the relationship between non-profit producers and professional societies, and its effect on the amount of material available: (4) the relationship between the technical complexity of the file and the amount of material offered: (5) the percentage of producers offering source lists, classification code lists, and vocabulary lists: (6) the need for vendor-produced material in lieu of search-specific information provided by producers: (7) the usefulness of free items: and (8) system-produced manuals vs. file-specific information from producers. Investigation methods of the study are outlined, and charts identify the databases reviewed, the number of reference materials offered by three types of database producers, search aid availability, reference material content, and free items. A bibliography is provided. (FM)

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DATABASE USER AIDS AND MATERIALS--A STUDY

by

Betty Unruh

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DATABASE USER AIDS AND MATERIALS--A STUDY

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Abstract: The types and numbers of database user support materials are multiplying as producers become more involved in the servicing of the user community and as the number of online databases grows. (Approximately 100 files are available now for online searching, and each month brings a few more on each of the systems.) Currently available materials can vary in cost, format, depth, and purpose. This paper is an assessment of the available materials, offering comments on both availability and cost as well as the relationship, if any, between the search materials and the topic area of the file or the organizational type of the producer. This paper does not attempt to evaluate content or measure quality; it discusses vendor-produced materials only when a contrast between the two groups would be helpful.

1. INTRODUCTION

Newly trained searchers find themselves in a curious position. Eager to begin and anticipating searching on a variety of topics, they have neither the luxury of focusing on a single set of files nor the possibility of becoming expert on all candidate files. It is difficult for most novice searchers to know where to start. Both funds for purchase of user materials and time available to read them are limited.

Bibliographies of available user materials are now being compiled; but, today, searchers are uncertain which producers make what information available to assist in cost-effective (even if infrequent) searching. Should the new searcher contact individual database producers or simply acquire all file descriptions produced by online system vendors? Unfortunately, there is no clear answer to this dilemma.

In determining a course of action, a searcher might well make some assumptions about producers, their respective databases, the types of materials available for various kinds of files, etc. It is these assumptions that this paper addresses--which are accurate?

To compile the necessary data, I solicited information and materials from all database producers which had files publicly available on SDC and/or Lockheed in March 1979. (Note: investigative procedures are detailed at the end of this paper.)

6.2

The content of these 85 databases or database families was distributed as follows:

o Scientific/technical	43	o Business	9
o Social Science	21	o General	12

The producer of each file was assigned to one of the following organizational types:

o For-profit corporation	34	o Government agency	16
o Non-profit organization	35		

A complete listing of all files about which I requested information is given in Chart I. Databases are listed alphabetically in two groups: those whose producers responded to my request and those whose did not. The chart also indicates on how many systems the file is available; to which organization type the producer belongs; and to which topic area the file was assigned for purposes of this study.

The new searcher would probably be interested in the following information about the file and its user materials:

- o Does the file include citations to serial publications? Is a list of source publications available?
- o Is a classification scheme used for the file? Is it available from the producer or system vendor?
- o Is a controlled vocabulary or thesaurus used to index the file? Is it available? From whom?
- o Has anyone put together helpful hints or other search technique short-cuts that would be useful? From whom are they available?

The new searcher, in answering these questions, could be expected to make assumptions about the material available . . . assumptions largely dependent on the type of organization producing the file and the subject matter of the file. With the information collected from database producers and system vendors, it is possible to determine how many of the searcher's assumptions can be supported.

2. ASSUMPTION ONE: FOR-PROFIT DATABASE PRODUCERS PROVIDE MORE REFERENCE MATERIAL THAN EITHER NON-PROFIT OR GOVERNMENT PRODUCERS.

2.1 The data in Chart II reveals that for-profit database publishers did indeed rank higher than the other groups in providing each individual item of reference material, with the exception of controlled vocabularies. They were most likely to provide source material authority lists; 84% did as opposed to 64% of the non-profit and 18% of the government database producers. They were more likely to provide classification codes (62% vs. 45% and 36%).

With regard to controlled vocabularies, however, for-profit organizations fell at the bottom of the list: 55% vs. 73% for non-profit organizations and 81% for government agencies. (The government number is somewhat misleading since several databases use the ERIC thesaurus and only one thesaurus was listed for NTIS; in fact, NTIS produces some 17 different major and minor thesauri. Had the NTIS thesauri been considered individually, the government percentage would have risen well over 100%.)

2.1.1 Classification Codes/Examples

The searcher should consider that item availability does not connote similar content or treatment from all producers. For example, the ISMEC User Aid contains the classification scheme used in that file; it is listed, without explanation, on one page. In the BIOSIS Search Guide, the concept code section lists the codes both alphabetically and numerically and assigns them to particular headings; scope notes indicate what the codes include and exclude. Also given are the years during which a code was applied. Additional coding information is found in the Biosystematic code section, representing the taxonomic categories.

2.1.2 Source Lists/Examples

Content variety is evidenced in the source material listings as well. It is frequently possible to obtain more information than simply a list of titles. The PAIS periodicals listing includes, for each title, the publisher name and address as well as subscription costs, indicating, where applicable, variations for members or different currencies. The journal list for ABI/INFORM includes the CODEN, ISSN, and ABI/INFORM journal code as well as the coverage starting date. Additional ABI/INFORM journal lists group the journals topically and cite those core journals which are abstracted cover-to-cover.

2.1.3 Vocabularies/Examples

The extent to which a producer displays a controlled term list varies as well. The most straight-forward approach is a simple listing of the terms indicating, perhaps, related terms and use/used for references, as is found in the Pollution Abstracts User Aid. The INSPEC Thesaurus, on the other hand, may include for each term:

1. see also references.
2. scope notes showing subject represented by the term.
3. term relationships including those terms which are broader, top, narrower, and related.
4. classification code(s) for the area in which this term would normally be used.

SSIE makes available not only the Guide to SSIE Subject Indexes and Vocabulary but also the SSIE Subject Terms and Synonyms. The first gives an introduction to and background of the hierarchical index of the SSIE terms as well as special hints for selecting the terms--what one could retrieve from that selection as opposed to what one actually wants to retrieve. This index is a listing of all five levels of the SSIE subject indexes, approximately 40,000 terms, from which the user can select the highest level term for the widest scope or the most specific term for the narrowest concept.

The latter vocabulary aid is a three-volume computer printout of all terms from all levels of the indexes as well as approximately 60,000 synonyms and alternative forms of the terms. For each are given the valid subject term and the index from which the subject term is taken. This listing can be used independently (its introduction explains content and possible uses) or in conjunction with the index guide.

2.2 What About Search Aids?

The widest disparity between for-profit companies and the two other producer types was found in the area of search aids. Users can acquire search aids (materials indicating database coverage, editorial policy, search hints, etc.) covering 62% of the files produced by for-profit

companies but only 37% of the non-profit files and only 31% of the government files.

In addition to being more readily available, the search aids of for-profit companies more frequently included file descriptions (see Chart III); 95% vs. 92% non-profit and 80% government; for-profits also led in offering system-specific information (71% vs. 62% non-profit and 60% government). However, more search hints were available from the non-profit sector (92% vs. 81% for the for-profit and 80% for the government files).

2.2.1 Search Aids/Examples

The INSPEC Database Users' Guide gives an overview of the types of source material cited and a discussion of each; a description of each citation field, including the editorial practices applicable per field; a discussion of both the classification and indexing schemes, including the purpose, method of assignment, and historical changes.

Search tips include when and why to use the classification coding system, use of controlled index and free terms, why one would use treatment codes. Searching hints continue in the strategy section which is presented on a system independent basis. The reader is told, for example, "This simple formulation could give relatively poor recall. It can be improved by breaking down the concept 'computer-aided' and adding some variant form." (p7.5)

2.2.2 Search Aid/Non-Producer's

Even though some producers do not, themselves, publish a search aid, a user can locate hints and techniques in the industry literature. ERIC has published a bibliography of literature about ERIC, both in print and online; some of the cited articles are on preparing ERIC searches or searching the database on a particular system.

3. ASSUMPTION TWO: GOVERNMENT DATABASE PRODUCERS EITHER CHARGE THE LOWEST AMOUNT FOR THEIR MATERIALS OR OFFER THE MOST FREE MATERIALS.

Cost comparisons were made in two categories: controlled vocabularies and search aids, most of which contained at lease one of the possible reference listings (classification codes, source authority lists, or vocabularies).

For controlled vocabularies, government-produced file prices ranged from $5 to $65; the average was $21.82. The range for non-profit files was $10 to $70, averaging $28.35. For-profit files exhibited both the widest range ($25-$160) and the highest average cost ($50.36). The government sector was indeed the most economical of the three for controlled vocabularies.

Search aid costs ranged from $16-$30 for the government files; from $10-$70 for the non-profit files, and from $4-$40 for the for-profit files. The average search aid cost, however, was quite close among the groups; here government files were not the least expensive. Government file search aids averaged $25.33; non-profit, $26.25; for-profit, $23.00.

If the new searcher is interested in even less expensive materials, three for-profit files have available free copies of the controlled vocabularies; all three files are produced by Data Courier, Inc. Government agencies will provide vocabularies at no charge for two databases. No free

vocabulary is available for any non-profit database.

The user will find that ten for-profit databases offer search aids at no charge. Only one non-profit and two government-produced files have free search aids.

4. ASSUMPTION THREE: NON-PROFIT DATABASE PRODUCERS HAVE CLOSE TIES WITH PROFESSIONAL SOCIETIES AND SO MAKE MORE MATERIAL IN TOTAL AVAILABLE THAN DO OTHERS.

4.1 Files from non-profit organizations outnumber those from the for-profit sector by only one, 35 to 34. As indicated on Chart II, fewer items were available from the non-profit organizations. Of 112 possible items, including source authority lists, classification codes, vocabularies, and search aids, the non-profit database producers made available only 62 (55%). In the for-profit group, on the other hand, of 94 possible items, 61 were provided (65%). The government rate was lowest; of 54 possible items, only 24 (44%) were available.

4.2 What about "full service?"

The above data counts each possible reference tool separately for each file. But what about the cumulative effect of having everything, of providing a "full service" one-stop group of materials with complete and comprehensive documentation on a database?

4.2.1 "Full Service"/Examples

One "full service" database producer is Chemical Abstracts Service. It offers a variety of materials, including a free journal list, an index guide with cross-references and indexing policy notes, a summary of the content of each of the 80 subject sections of CA; a natural language term list, a list giving the frequency of multi-word phrases from titles, as well as all the controlled vocabulary index headings from 1972-1978. There are also two major items, major in terms of both content and cost, for those searching the databases on a frequent and in-depth basis: Chemical Abstracts Service Source Index (CASSI) 1907-1979 which identifies not only the publications covered but also which libraries hold them, and the Parent Compound Handbook (PCH) which contains structural diagrams, CA Index Names, molecular formulas, CAS Registry Numbers and Ring Analysis for over 45,000 ring systems.

INSPEC also offers comprehensive reference materials: a thesaurus, previously discussed; a classification scheme; a subject guide to that classification scheme; a concordance to the classification; a guide to the classification codes; a list of journals; and the INSPEC Database Users' Guide, also previously mentioned.

4.2.2 Full Service/the for-profits

But users should not think that the for-profit sector has no complete services available. Both the Management Contents Thesaurus and the PTS Users Manual from Predicasts contain all of the terms, field codes, and list data a user would need for searching these files. The Management Contents aid, while it has no specific search tips, does include all of the search manuals from each of the three vendors offering the file. The user has therefore, the system specific information as produced by the system vendor.

5.0 ASSUMPTION FOUR: THE MORE TECHNICAL THE FILE, EITHER IN SUBJECT MATTER OR FILE FORMAT, THE MORE MATERIALS THE PRODUCERS WILL OFFER.

Assuming that the most technical databases in both areas will be scientific and technical files, one finds no support for this argument in the statistics. There were more individual items (see chart IV) for the sci/tech files than any of the other three topic groups, but there also were more sci/tech files, 43 vs. 21 social science, 9 business, and 12 general.

5.1 Reference Aids

Source lists were available for 67% of applicable sci/tech files. The percentage for general databases and for social science files was 50%, for business files, 71%.

Of those files having classification code systems, more files in the business area (67%) made the code lists available. The percentage for general files stood at 38%; social science at 38%; and sci/tech at 56%.

Of all files with controlled vocabularies, business files led with 83% availability vs. sci/tech with 78%; social science with 67%; and general with 25%.

5.2 Search Aids

For search aids, the business files tied with sci/tech files at 56%. Social science databases had 38% availability and general 17%.

In looking only at search aids, both general and social science files ranked highest (Chart V), each with 100% inclusion of basic descriptions, search tips, and system specific information. Sci/tech files ranked second at 76% vs 67% for the business files.

The new user will also have equal luck in obtaining free materials for sci/tech and social science files, where 38% provide search materials free vs. 20% of the business files. No complimentary materials were noted for the general information files.

5.3 Vocabularies/Costs

In terms of price comparisons, vocabulary lists for the sci/tech files ranged from $10 to $160 and averaged $39.20; four vocabulary lists were offered at no charge. The business file vocabularies were next most expensive with a $12.95-$40 range, a $27.09 average, and no free lists. The social science files were least expensive; the range was $5-$30, the average $14.15, and one was free. The general topic files were statistically insignificant with only two possibilities, a $21 to $36 range, a $28.50 average.

5.4 Search Aids/Costs

In the search aids category, however, the most expensive set of files was the business group. The price range was $25-$40, with a $29.50 average. All except one of these search aids, however, contained the controlled vocabularies. The sci/tech files were next most expensive, ranging from $4-$70 with a $27 average; however nine items were free. The social science file user materials ranged from $10-$35, with a $22.50 average; three were free. Only one search aid was produced for the general files, at $22; it serves both Magazine Index and National Newspaper Index.

A searcher should consider, however, that only 25% of the files had search aids not containing at lease one of the reference tools mentioned in this study. Among that group are: CRECORD, FEDREG, TITUS, ISI (two files,

one manual), CIS (really a general aid not focusing on online access), World Textiles, CAB Abstracts, INSPEC, Compendex. For the rest of the files, the price of a search aid included all or some combination of classification codes, source lists, and vocabularies. The $45 for the Environmental Periodicals Bibliography Aid also purchases the vocabulary; the $10 for the Excerpta Medica User Manual also buys the listing of the 45 sections, all geographic codes, and the EMITAGS wtih scope notes.

6. ASSUMPTION FIVE: MOST PRODUCERS, REGARDLESS OF COMPANY TYPE OR FILE TOPIC, PRODUCE SOURCE LISTS, CLASSIFICATION CODE LISTS, AND VOCABULARY LISTS IF THEIR FILES HAVE SUCH FIELDS.

6.1 As logical as this assumption seems, a look at the databases providing all possible reference materials reveals that "most" is applicable in only one case.

Grouping the files topically, 74% of the business files offered complete service, i.e., a reference list for each applicable to the file. The sci/tech files had complete service in 68% of the cases; social science in 52%; and general in only 33%.

Looking at the same databases grouped by corporate affiliation, we found that the for-profits ranked highest with 66%; the non-profits next with 63%; government last at 50%.

While the percentages seem low, the user should note that the files for which there is total documentation include the "authority files": BIOSIS, CA Search, Compendex, PsycINFO, NTIS, and INSPEC as well as highly specialized files: Excerpta Medica, Management Contents, SciSearch, Social SciSearch, American History & Life, and Oceanic Abstracts.

6.2 Unavailability/The Reasons

No attempt was made in this study to assess why certain materials were not available. Regarding vocabulary availability, however, one should know that:

- CRIS is in the process of preparing their controlled vocabulary for distribution.
- Both National Newspaper Index and Magazine Index use LC subject headings for their vocabulary terms and do not make the list available themselves as it is available from other sources.
- Some files, including Dissertation Abstracts and Conference Papers Index, generate keywords from the title field (making a listing at least impractical if also not particularly useful).
- Several producers, including Foods Adlibra, refer the searcher to the print editions and indexes.

7.0 ASSUMPTION SIX: FEW PRODUCERS PROVIDE MATERIALS WITH SEARCH SPECIFIC INFORMATION, SO I SHOULD OBTAIN THE VENDOR-PRODUCED MATERIAL FOR THAT INFORMATION.

This assumption is part of the "I need everything available" syndrome. An analysis shows, however, that both searching hints and system specifics are indeed included in material from the file producers. The percentages are quite high for each group, whether organized by producer type or file topic.

7.1 Sci/Tech Files

For the sci/tech files, 83% of the search aids available included search tips and 54% provided system-specific information. For example, the Excerpta Medica User Manual has full discussion of selection criteria, noting how it can vary for either a topic area or a literature type. Search hints, which appear in the citation element discussion, include languages used in the title, the editorial practices for an author name, and what components appear in the author affiliation field. A lengthy explanation of the abstract field and five pages devoted to indexing and classification also are included.

The chapter on information retrieval includes answers to when to select Excerpta Medica and how to search it most effectively. The search technique chapter discusses strategy both system independently and DIALOG specifically with scope notes explaining procedures when suitable.

7.2 Social Science Files

The social science files ranked highest; 100% of the files offered search aids including both search tips and system specifics. The Users Reference Manual published by Psychological Abstracts Information Services discusses full-text searching and when to use it; subject terms and codes and when to use them for best retrieval; and the usage of full-text and controlled terms in combination. The DIALOG portion of the manual includes both annotated sample searches and hints and shortcuts for searching PsycINFO on Lockheed. This manual also offers the user detailed file description, editorial practices explanation and a complete discussion of each data element.

Searching hints in the User's Reference Manual for Sociological Abstracts incorporate such system specifics as, "It is suggested that the index fields (DE and ID) not be relied on by themselves when searching by subject, since terms within the discipline are not precisely defined," and "Because the Corporate Source (CS) field is part of the Basic Index, extraneous items are sometimes retrieved." (p.6.2) Hints in the producer's manual are in addition to the various suggestions found in the DIALOG guide to file 37. Similar format and content are found in the user manual for LLBA, also produced by Sociological Abstracts, Inc.

7.3 Business Files

The business search aids contained search tips and system-specific information 60% of the time. Both the Management Contents Thesaurus and the PTS User Manual contain system specific information. The ABI/INFORM User Aid and User Guide both contain system specifics and search tips, including how to retrieve most effectively a particular journal or how to insure retrieving all citations by a particular author.

7.4 General Files

The general files also ranked in the 100% category; the high percentage is due to only two of the databases, National Newspaper Index and Magazine Index, having user materials. Both are produced by the same company, and both share the same user aid. That aid, however, tells the user not only when to consider using the two files but also how to search a particular element and when limiting to that field would be particularly advantageous, e.g., limiting to Named People allows the searcher to select a person as the topic rather than the author (p3-6). With a listing of the types of descriptors are instructions about limiting to that field. All search tips for each file are system specific.

7.5 Organizational Breakdown

Looking at the same files by producer type, the non-profits ranked highest; 92% of their search aids had hints, 73% had system specifics. The for-profits ranked second; 81% with search hints; 71% with system specifics. In the government files, search hints were in 80% and system specifics in 60%.

8.0 ASSUMPTION SEVEN: A FREE ITEM WILL PROBABLY BE LESS USEFUL, I.E., MORE PROMOTIONAL THAN INFORMATIVE. AFTER ALL, YOU GET WHAT YOU PAY FOR.

A user does not have that many free items to choose from. As noted earlier, only 13 free search aids were offered for all of the files in question. Of those 13, however, many offered far more than promotional verbiage.

8.1 Data Courier, Inc.

In each of the six Data Courier user aids, file coverage is described; searchable fields are discussed individually, with hints or cautions included when suitable; searchable elements are available in a Search Guide format listing each system's approach to the elements; in three, the controlled vocabulary used in indexing the citations is included; and where applicable, the list of source materials regularly cited is given.

8.2 ISI

The ISI publication "User's Guide to Online Searching of SciSearch and Social SciSearch" avoids promotion in giving the searcher detailed step-by-step search information for the two files. For each searchable field, it discusses editorial practices, the command to limit a search to that field, examples of that limit, and any cautions the searcher should consider. Other sections include "Citation Indexing--Discussion and Applications," "Citation Indexing--Educating your Patrons," "Title Word Searching Discussion," "Using Title Words as Effective Search Terms," "Using the Source or Author Index," and "The Source Journal Index."

Each of these sections describes the topic, offers search approaches to consider, gives examples of them, offers the logic for the search giving modification along the line, and then makes comments about the search after completion. In the Appendices Section, the user also has a list of variant spellings to consider and the basic rules for them, a list of language and document type codes, and a list of common causes for zero postings.

8.3 Agricola

Information about Agricola is included in the CAIN Online User's Guide. The systems are discussed in complete detail; reasons, explanations, tips, examples for each statement are given. The guide begins with an introduction to online searching in general, noting the systems/procedures/principles by which a computer system works. It leads the reader step-by-step through protocol for communicating with the computers, to the point of defining the possible error messages.

Each Agricola data element is described, with indexing procedures or editorial practices included wherever applicable; the category codes, with complete scope notes, are listed. Another section covers system searching on both DIALOG System and ORBIT, including a discussion of what is actually occurring when a certain command is entered as well as a command and feature summary, and explanations of all formats, the inverted file

components, and the various formatted fields--what is in them and how to search them. There is a final separate section for special searching techniques as well.

9.0 ASSUMPTION EIGHT: ONLY THE DATABASE PRODUCERS WILL OFFER INFORMATION ABOUT THE FILES THEMSELVES; THE SYSTEM PRODUCED MANUALS WILL BE SYSTEM SEARCH TECHNIQUES ONLY WITH NO FIELD SPECIFIC SEARCHING HINTS.

I NEED MATERIALS FROM BOTH.

While the producers certainly are the major source for database content and search hint information, the vendor-produced file sections contain more than system procedures and examples. Each system manual is organized by the data elements in the file, giving the assigned field codes and an example of limiting to that field on the system. Some manuals also contain minisearches illustrative of each field limit requested. Several of the sections include specific comments about the file and/or hints for better, more satisfactory searching of it. Although I did not analyze closely the system produced information, I did make spot comparisons of producer and vendor manuals.

The Lockheed guide to Management Contents includes tips on how to use the broad descriptive terms as well as the JC= limiter rather than the JN limiter. The Management Contents Data Base Thesaurus, itself, does not give searching hints.

In the Lockheed Predicasts File 16 section, there are hints on utilizing scope notes and geographic term searching as well as details on the assignment of product codes by indexers. Again, these search hints are not present in the PTS Users Manual.

For ABI/INFORM, the producer's materials do contain system specific information, but database specifics are in the vendor publications as well. In the Preliminary Edition for the reloaded ABI/INFORM file, Lockheed includes in the descriptor field portion an explanation of both excessive terms in the descriptor field of early records and the mix of both upper and upper/lower case descriptors. In the section on CODENs, a new field in ABI/INFORM, is given the hint to consider using the JC= limiter instead and the reasons why. The ABI/INFORM section of the old manual includes system protocols and procedures but also indicates how useful reviewing the abstract can be.

The SDC draft manual for the INFORM file contains mostly system specific information, i.e., treatment of each data element and the method of retrieval on ORBIT with a mini-sample search for each. The manual does include, however, lists of the field codes and abbreviations used with some controlled terms as well as a list of the file's source journals.

10. OTHER CONSIDERATIONS

10.1 Newsletters

In an effort to assess available search aids and to obtain all necessary information for effective searching, a searcher should not overlook one of the most useful aids--the newsletter. Whether produced by database producers or systems these newsletters are the vehicle by which the "newest" information is disseminated ir a timely fashion. Compendex, BIOSIS, the Data Courier files, FSTA, and CRECORD, among others, have newsletters in which the searcher can find discussions of file changes, the

producer's news and announcements, and search hints, frequently prompted by user questions.

Having these is most important since document updating, by either producer or vendor, will postdate the actual change or event. Database producers frequently revise their material only yearly. With all of the changes and reloads for various files in addition to the sheer number of files for which vendors provide documentation, there can be a considerable length of time before new and complete documentation is in the searcher's hands. ABI/INFORM, for example, was reformatted and reloaded in early 1978. As of Summer 1979, no completely revised information in final edition format had been made available from a vendor. The user has had access to that data only through newsletter publications from the producers and the vendors.

10.2 Training Sessions

Searchers interested in effective searching should consider producer training sessions. Though time and money availability will largely determine how many of these meetings a searcher can attend, it is in these meetings that searchers will learn all the specifics that may not appear in print, even if the producer is one of the "full service" companies. In addition, the advantages of being able to ask questions should not be underestimated. For several files, search aids are distributed only to training session attendees. Chemical Abstracts Service has, as a part of its training package, How to Use CA Search, a publication unavailable separately. BIOSIS also has training materials available in addition to the BIOSIS Search Guide.

10.3 Need Evaluation

At some point a searcher must make an evaluative decision about materials to acquire. Having all available reference tools or search aids is perhaps necessary only for those files one constantly selects or for which free-text searching is not effective. If a file becomes an accepted choice for most search questions, knowing as much as possible and having on hand as many reference tools as are offered is recommended. For example, ABI/INFORM abstracts are searchable on a free text basis; however, searchers frequently accessing that file should consider obtaining the User Guide which contains the Controlled Vocabulary.

Databases which, like BIOSIS or Predicasts, are heavily coded or indexed can be searched most effectively only by use of the codes and special search techniques. For these files, searchers should have all user materials.

INVESTIGATION METHODS

To compile the data for this paper, all database producers having files publicly accessible on SDC or Lockheed in March 1979 were contacted. They were requested to complete a brief questionaire which asked them to list the reference materials and search aids they made available along with a brief description and the price; they were also asked to send copies of each.

I categorized all producers in two ways:

- Were the producers for-profit companies; non-profit organizations, i.e., affiliated with a society or association; or government agencies.
- Were the files scientific/technical, business, social science, or "general," e.g., the files indexing newspapers or those covering topics not adequately represented by any of the other three areas.

I also noted on how many systems among Lockheed, SDC, BRS, and IRS the files were loaded.

I then checked each of the vendor produced file guide sheets to try and establish if the particular file:

- cited source material for which a listing would be appropriate, i.e., journal literature.
- had among its citation elements code fields, i.e., section or classification codes.
- was indexed by a controlled vocabulary.

When the material supplied by the various producers was inhouse, I scanned it to determine if the producers made available for the applicable fields the possible reference materials, e.g., if the file has coded elements, were code lists included?

I also wanted to know if the producers made available search aids (not necessarily physically separate) in addition to the code listings, vocabulary lists, and source lists. A search aid was defined as material which discussed the file in general or the type of material contained in each field, offered suggestions for use of that field, or revealed the editorial procedures. I checked for searching hints on both system specific and system independent bases. I also noted the price, if any, of the search aid.

Many producers were most generous in what they sent; I was readily able to determine the answers to the above questions. For both the producers who submitted only partial data or materials and the producers who did not respond to my letter, I assigned their files to the appropriate category as accurately as possible by consulting system literature, information industry newsletters and journals, and any other source which might indicate the availability of materials and their content or scope.

For each category, the possible delimiters were

yes: the file did have the field among the citation elements or the producer did make available the aid in question

no: the file did not have the field among the citation elements or the file had a certain field but the producer did not provide that information for the user.

undetermined: the file may or may not have a particular field or the producer may or may not make certain material available. The sources at my disposal did not make clear what the situation was; therefore, I was unable to assign a yes or no.

One final note about procedure. My purpose in compiling the data was to show as clearly and conveniently as possible what files had what type of materials available. Of the files listed in Chart I, in most cases there is a one-to-one relationship between the file listed and the producer. Producers with more than one file have, in many cases, databases with such distinct identities that there was no problem with the individual listing, e.g., EIC produces both Enviroline and Energyline each with its own unique vocabulary, user manual, topic coverage.

In trying to categorize the materials available, from whom, and of what type, there were four cases in which, however, my determined procedure and listing policy did not work. To adequately represent the facts without unduly confusing the issue, I consolidated the following:

- Predicasts refers to all of those files produced by Predicasts or represented by the marketing/training arm of that organization. Included, therefore, are the PTS files as well as CIN, produced by Chemical Abstracts Service, and the EIS files, produced by Economic Information Systems, Inc.
- IFI/Plenum is the one listing for the five online files.
- CA Search, the merged CA Condensates and CASIA, is listed even though there are still materials available from Chemical Abstracts Service on the individual components of CA Search.
- Biosis is listed even though SDC makes a companion file, BIOCODES, available.

Chart I
Databases Reviewed

Responders

Databases	Systems	Subject	Producer
ABI/INFORM	3	B	P
AGRICOLA	3	T	G
AIM/ARM	1	S	G
AMERICA: HISTORY & LIFE	1	S	P
ART MODERN	1	S	P
ASI	1	S	P
BIOSIS*	4	T	N
CA PATENT CONCORDANCE	1	T	N
CA SEARCH*	4	T	N
CAB ABSTRACTS	1	T	G
CHEMNAME	2	T	N
CHILD ABUSE AND NEGLECT	1	S	G
CIS	1	S	P
COMPENDEX	3	T	N
CONFERENCE PAPERS INDEX	2	T	P
CRECORD	1	S	P
CRIS	1	T	G
DISCLOSURE	1	B	P
DISSERTATION ABSTRACTS	3	M	P
ECONOMIC ABSTRACTS INTERNATIONAL	1	B	G
ENERGYLINE	3	T	P
ENVIROLINE	3	T	P
EPB/ENVIRONMENTAL PERIODICALS BIBLIOGRAPHY	1	T	N
ERIC	3	S	G
EXCERPTA MEDICA	1	T	P
FEDREG	1	S	P
FOOD SCIENCE AND TECHNOLOGY ABSTRACTS (FSTA)	2	T	G
FOUNDATION DIRECTORY	1	M	N
FOUNDATION GRANTS INDEX	1	M	N
FROST & SULLIVAN DM	1	B	P
GEOREF	1	T	N
GRANTS	1	M	P
HISTORICAL ABSTRACTS	1	S	P
INSPEC	4	T	N
INTERNATIONAL PHARMACEUTICAL ABSTRACTS	1	T	N
ISMEC	3	T	P
LABORDOC	1	B	N
LANGUAGE AND LANGUAGE BEHAVIOR ABSTRACTS	1	S	N
MAGAZINE INDEX	1	M	P
MANAGEMENT CONTENTS	3	B	P
METADEX	2	T	N
MRIS	1	T	G
NATIONAL FOUNDATIONS	1	M	N
NATIONAL NEWSPAPER INDEX	1	M	P

Legend

B - business
T - sci/tech
S - social science
M - general

P - for-profit
N - non-profit
G - government

Databases	Systems	Subject	Producer
NICSEM/NIMIS	2	S	G
NTIS	4	T	G
OCEANIC ABSTRACTS	3	T	P
PAIS	1	S	N
PAPERCHEM	1	T	N
PHARMACEUTICAL NEWS INDEX	2	T	P
PHILOSOPHER'S INDEX	1	S	N
PIRA	1	T	N
POLLUTION ABSTRACTS	4	T	P
PREDICASTS*	2	B	P
PSYCINFO	3	S	N
SCISEARCH	1	T	P
SOCIAL SCISEARCH	3	S	P
SOCIOLOGICAL ABSTRACTS	1	S	N
SPIN	1	T	N
SSIE	2	T	N
TITUS	1	T	G
TULSA	1	T	N
USPSD	1	S	N
WORLD ALUMINUM ABSTRACTS	2	T	N
WORLD TEXTILES	1	T	N
Non-Responders			
ACCOUNTANT'S INDEX	1	B	N
APILIT	1	T	N
APIPAT	1	T	N
APTIC	1	T	G
ASFA	1	T	G
EXCEPTIONAL CHILD EDUCATION ABSTRACTS	2	S	G
FOODS ADLIBRA	1	T	P
GEOARCHIVE	1	T	P
GPO MONTHLY CATALOG	1	M	G
IFI/PLENUM*	1	T	P
LIBCON	1	M	P
LISA	2	S	N
METEOROLOGICAL & GEOASTROPHYSICAL ABSTRACTS	1	T	N
MLA INTERNATIONAL BIBLIOGRAPHY	1	S	N
NDEX	1	M	P
P/E NEWS	1	B	N
QUEBEC ACTUALITE	1	M	P
SAE	1	T	N
SAFETY	1	M	P
WORLD PATENTS INDEX	1	T	P

Footnotes, Chart I:

BIOSIS: one listing for BIOSIS Previews & BIOCODES, available via SDC.

CA SEARCH: one listing for newly merged file of CA Condensates & CASIA.

PREDICASTS: one listing for all PTS databases including the time series; EIS Industrial Plants and EIS Nonmanufacturing Establishments produced by Economic Information System, Inc.; and CIN produced by Chemical Abstracts Service of the American Chemical Society.

IFI/PLENUM: one listing for CLAIMS™/CHEM, CLAIMS™/U.S. PATENTS 71-77; CLAIMS™/U.S. PATENT ABSTRACTS 78-, CLAIMS™/CLASS, and CLAIMS™/U.S. PATENT ABSTRACTS WEEKLY.

Chart II

Database Reference Materials/by Producer Organizational Type

	Possible Number	Available	Not Available	Undetermined
Profit				
Sources	19	16	1	2
Classification	21	13	3	5
Vocabulary	20	11	7	2
Search Aids	34	21	8	5
Non-Profit				
Sources	28	18	7	3
Classification	20	9	4	7
Vocabulary	30	22	4	4
Search Aids	35	13	16	6
Government				
Sources	11	2	3	6
Classification	11	4	3	4
Vocabulary	16	13	2	1
Search Aids	16	5	10	1

Chart III

Search Aid Availability and Components/by
Producer Organizational Type

	Possible Number	Available	Not Available	Undetermined
For-Profit				
Search Aids	34	21	8	5
Basic Description	21	20	0	1
Search Tips	21	17	2	2
System Specific	21	15	2	4
Cost	21	11		
Free	21	10		
Non-Profit				
Search Aids	35	13	16	6
Basic Description	13	12	0	1
Search Tips	13	12	0	1
System Specific	13	8	4	1
Cost	13	12		
Free	13	1		
Government				
Search Aids	16	5	10	1
Basic Description	5	4	0	1
Search Tips	5	4	0	1
System Specific	5	3	1	1
Cost	5	3		
Free	5	2		

Chart IV

Database Reference Materials/by Database Content

	Possible Number	Available	Not Available	Undetermined
Science/Technology				
Sources	33	22	7	4
Classification	25	14	4	7
Vocabulary	37	29	5	3
Search Aids	43	24	16	3
Social Science				
Sources	16	8	3	5
Classification	13	5	5	3
Vocabulary	15	10	4	1
Search Aids	21	8	12	1
Business				
Sources	7	5	1	1
Classification	6	4	0	2
Vocabulary	6	5	0	1
Search Aids	9	5	0	4
General				
Sources	2	1	0	1
Classification	8	3	1	4
Vocabulary	8	2	4	2
Search Aids	12	2	6	4

Chart V

Search Aid Availability and Components/by Database Content

	Possible Number	Available	Not Available	Undetermined
Science/Technology				
Search Aids	43	24	16	3
Basic Description	24	22	0	2
Search Tips	24	20	1	3
System Specific	24	13	7	4
Cost	24	15		
Free	24	9		
Social Science				
Search Aids	21	8	12	1
Basic Description	8	8	0	0
Search Tips	8	8	0	0
System Specific	8	8	0	0
Cost	8	5		
Free	8	3		
Business				
Search Aids	9	5	0	4
Basic Description	5	4	0	1
Search Tips	5	3	1	1
System Specific	5	3	0	2
Cost	5	5		
Free	5	1		
General				
Search Aids	12	2	6	4
Basic Description	2	2	0	0
Search Tips	2	2	0	0
System Specific	2	2	0	0
Cost	2	2		
Free	2	0		

Chart VI

Free Items/by Producer Organizational Type

	Free Items	Sale Items	Total Files	Possible Files
For-Profit	13	15	27	34
Non-Profit	7	28	29	35
Government	5	12	15	16

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